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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/534,824	03/23/2000	Christopher J. Edge	10128US01	9982
7590	11/18/2004		EXAMINER	
STEVEN J SHUMAKER SHUMAKER & SIEFFERT PA 8425 SEASONS PARKWAY SUITE 105 ST.PAUL, MN 55125			SMITH, PETER J	
			ART UNIT	PAPER NUMBER
			2176	

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/534,824	EDGE ET AL.	
	Examiner	Art Unit	
	Peter J Smith	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 June 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-49 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) Claim(s) _____ is/are allowed.
6) Claim(s) 1-49 is/are rejected.
7) Claim(s) _____ is/are objected to.
8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date .

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ .
5) Notice of Informal Patent Application (PTO-152)
6) Other: ____ .

DETAILED ACTION

1. This action is responsive to communications: amendment filed 6/23/2004.
2. Claims 1-49 are pending in the case. Claims 1, 10, 18, 26, 32, 38, 44, 45, and 46 are independent claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-49 rejected under 35 U.S.C. 103(a) as being unpatentable over Marimont, US 5,835,099 patented 10/10/1998 in view of Applicant's Admitted Prior Art (APA).**

Regarding independent claims 1, 10, and 18, Applicant discloses in page 1 line 24 – page 2 line 5 of the specification that a page description language permits the definition of pages using complex commands and subroutines to create graphic objects and generally calls these commands and subroutines implicit color commands. Applicant also discloses that it is well known that the image data may be converted to explicit data by a raster image processor. Identifying implicit color commands within a page description file must be inherently true to effect the conversion of the admitted prior art. Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57.

The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Marimont with the APA to have created the claimed invention. It would have been obvious and desirable to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont. It would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image.

Regarding dependent claims 2, 11, and 19, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The manipulations of Marimont are performed without the use of a raster image processor because the image is not being changed into a bitmap format. The use of commands are still used and it would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image.

Regarding dependent claims 3, 12, and 20, Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. It would have been obvious to have used explicit color commands to have

defined the divided structures of the color regions to have simplified the image and thus they could have been manipulated independently.

Regarding dependent claims 4, 13, and 21, Marimont teaches an implicit color command defining a reproduction of a graphic image over a color range in col. 6 line 65 – col. 7 line 1. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function. It would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image.

Regarding dependent claims 5, 14, and 22, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function. It would have been obvious to have converted substantially all of the implicit color commands to explicit color commands to have defined the divided structures of the color regions to have simplified the

image and to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 6, 15, and 23, Marimont teaches a smooth shading implicit color command in col. 6 line 65 – col. 7 line 1.

Regarding dependent claims 7, 16, and 24, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function. It would have been obvious to have assigned explicit color commands to each subdivision of the color region to have been consistent with the parameterized implicit color command function to have simplified the image and to have enabled a better transformation of image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 8, 17, and 25, Applicant discloses in page 1 lines 10-11 that cyan, magenta, yellow, and black are typical colors used to describe and image. It would have been obvious to one of ordinary skill in the art at the time of the invention to have implemented a combination of Marimont using the typical color scheme disclosed by the Applicant.

Regarding dependent claim 9, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The structures in combination define a visual output that is analogous to visual output defined by the corresponding implicit color commands.

Regarding independent claims 26, 32, and 38, Applicant discloses in page 1 line 24 – page 2 line 5 of the specification that a page description language permits the definition of pages using complex commands and subroutines to create graphic objects and generally calls these commands and subroutines implicit color commands. Applicant also discloses that it is well known that the image data may be converted to explicit data by a raster image processor. Identifying implicit color commands within a page description file must be inherently true to effect the conversion of the admitted prior art. Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Marimont with the APA to have created the claimed invention. It would have been obvious and desirable to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont. It would have been obvious to have used implicit color sub-commands to have defined the divided structures of the color regions to have allowed the

user to have greater control over the manipulation of the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 27, 33, and 39, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The manipulations of Marimont are performed without the use of a raster image processor because the image is not being changed into a bitmap format. The use of commands are still used and it would have been obvious to have used implicit color sub-commands to have defined the divided structures of the color regions to have allowed the user to have greater control over the manipulation of the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 28, 34, and 40, Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. It would have been obvious to have used implicit color sub-commands to have defined the divided structures of the color regions to have allowed the user to have greater control over the manipulation of the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 29, 35, and 41, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. It would have been obvious to have converted substantially all of the implicit color commands to implicit color sub-commands to have defined the divided structures of the

color regions to have allowed the user to have greater control over the manipulation of the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claims 30, 36, and 42, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function.

It would have been obvious to have converted the some implicit color commands to implicit color sub-commands and some other implicit color commands to explicit color commands to have defined the divided structures of the color regions to have allowed the user to have greater control over the manipulation of the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont. The combinational use of both implicit sub-commands and explicit sub-commands would have allowed both the smoothly varying and constant color sub-regions to have been represented adequately.

Regarding dependent claims 31, 37, and 43, Applicant discloses in page 1 lines 10-11 that cyan, magenta, yellow, and black are typical colors used to describe an image. It would have been obvious to one of ordinary skill in the art at the time of the invention to have

implemented a combination of Marimont using the typical color scheme disclosed by the Applicant.

Regarding independent claims 44, 45, and 46, Applicant discloses in page 1 line 24 – page 2 line 5 of the specification that a page description language permits the definition of pages using complex commands and subroutines to create graphic objects and generally calls these commands and subroutines implicit color commands. Applicant also discloses that it is well known that the image data may be converted to explicit data by a raster image processor. Identifying implicit color commands within a page description file must be inherently true to effect the conversion of the admitted prior art. The implicit color commands within a page description file must also be inherently accessed to implement the conversion.

Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Marimont with the APA to have created the claimed invention. It would have been obvious and desirable to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as

is disclosed in the abstract of Marimont. It would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image. The manipulations of Marimont are performed without the use of a raster image processor because the image is not being changed into a bitmap format. The use of commands are still used and it would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image.

Regarding independent claim 47, Applicant discloses in page 1 line 24 – page 2 line 5 of the specification that a page description language permits the definition of pages using complex commands and subroutines to create graphic objects and generally calls these commands and subroutines implicit color commands. Applicant also discloses that it is well known that the image data may be converted to explicit data by a raster image processor. Identifying implicit color commands within a page description file must be inherently true to effect the conversion of the admitted prior art. The implicit color commands within a page description file must also be inherently accessed to implement the conversion.

Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Marimont with the APA to have created the claimed invention. It would have been obvious and desirable to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont. It would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image. The manipulations of Marimont are performed without the use of a raster image processor because the image is not being changed into a bitmap format. The use of commands are still used and it would have been obvious to have used explicit color commands to have defined the divided structures of the color regions to have simplified the image.

Regarding independent claim 48, Applicant discloses in page 1 line 24 – page 2 line 5 of the specification that a page description language permits the definition of pages using complex commands and subroutines to create graphic objects and generally calls these commands and subroutines implicit color commands. Applicant also discloses that it is well known that the image data may be converted to explicit data by a raster image processor. Parsing the page description file to identify the implicit color commands must be inherently true to effect the conversion of the admitted prior art.

Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. The Examiner's understanding of the explicit color command of the claimed invention is that it is essentially a narrowly constrained implicit color command. The explicit color command may apply to a region of the

page description language just as an implicit color command, but it differs in that only one single color attribute is assigned to the whole region instead of defining the pixel values indirectly through use a mathematical function.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Marimont with the APA to have created the claimed invention. It would have been obvious and desirable to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont. It would have been obvious to have used corresponding explicit color commands to have defined the divided structures of the color regions previously defined by implicit color commands to have simplified the image and to have enabled a better transformation of the image and its colors as is disclosed in the abstract of Marimont.

Regarding dependent claim 49, Marimont teaches an implicit color command function in col. 6 line 65 – col. 7 line 1. Marimont teaches dividing a color image region into spatial and color space structures, which then can be manipulated independently in col. 7 lines 53-57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have left intact implicit spatial commands within the page description file which were not converted to explicit spatial commands so that the file could have been organized more compactly.

Response to Arguments

5. Applicant's arguments filed 6/23/2004 have been fully considered but they are not persuasive. Regarding Applicant's argument on pages 2 and 3 that the Examiner has improperly

characterized the Applicant's Admitted Prior Art (APA), the Examiner maintains that the interpretation set forth in the previous office action is reasonable. A raster image processor converts a page description language containing implicit and explicit color commands and converts them into a bitmap format. A bitmapped graphics file defines each pixel explicitly. Each pixel has an associated color attribute exclusive to the pixel. This is least efficient representation of an image, but also it is the most accurate as each pixel is explicitly defined. What the Examiner is asserting is that since the raster image processor converts a page description language containing implicit, explicit, or both color commands into a bitmapped format, the raster image processor can and does convert an implicit color command into an explicit color command for each pixel of the image.

Furthermore the Examiner believes Applicant may be in some way misinterpreting the Examiner's characterization of the APA because, on page 3 of Applicant's arguments, Applicant has improperly altered the text from the Examiner's office action. The Examiner's point is that the identification of implicit color commands within a page description file by a raster image processor to generate an explicit bitmap file is necessary in order to execute, or effect, the conversion of a page description language containing an implicit command into an explicitly defined bitmapped format. The Examiner is not saying the identification of the implicit color commands is necessary to have an influence, or affect, on the conversion process. Consequently, the Examiner maintains the characterization of the APA set forth in the previous office action.

Regarding Applicant's arguments in pages 3-7 that the combination of Marimont and APA is both improper and failing to teach the claimed invention, the Examiner believes that the combination of the teachings is proper and the invention is taught by the combination as

presently claimed. Marimont teaches in col. 3 lines 29-31 that smooth shading, an implicit color representation, can be mathematically modeled. Marimont further teaches in col. 7 lines 5-13 that parametric functions approximate colors in an image region. The evaluation of the functions for each region is essentially defining an explicit color for that region. Therefore, the Examiner believes that Marimont is relevant to the claimed invention and does not teach away as is asserted by Applicant. In view of Marimont evaluating color regions, the Examiner believes Marimont's teachings of prior art are related to the APA. It would have been obvious to have combined Marimont and the APA to have allowed for independent manipulation of the spatial and color structures to have enabled a better transformation of images and their colors as is disclosed in the abstract of Marimont. Therefore, the Examiner maintains that Applicant's invention is rendered obvious as presently claimed.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 571-272-4101. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
November 10, 2004



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER